

DESCRIPTION AND FIGURE OF COREGONUS NELSONII  
BEAN.

(Plates VIII and IX.)

BY HENRY W. FOWLER.

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Through the courtesy of Drs. Horace Jayne and M. J. Greenman I have recently had the opportunity of examining several large examples of the above White Fish received at the Wistar Institute of Anatomy in Philadelphia. As this species is only known from Dr. Bean's description and several references, it is of value to have more detailed information for the comparison of the species.

## COREGONUS NELSONII Bean.

*Proc. U. S. Nat. Mus.*, VII, 1884 (1885), p. 48. Nulato, Alaska.  
(E. W. Nelson.)

Head 5; depth 4; D. III, 11; A. III, 9; P. II, 16; V. I, 10; scales 81 in lateral line to base of caudal; 11 scales between origin of dorsal and lateral line, and 9 between latter and origin of ventral; about 33 scales before dorsal; width of head  $1\frac{7}{8}$  in its length; depth of head  $1\frac{1}{8}$ ; snout 4; eye  $7\frac{1}{8}$ ; maxillary  $4\frac{1}{8}$ ; interorbital space  $3\frac{1}{10}$ ; mandible  $3\frac{1}{4}$ ; second dorsal ray  $1\frac{1}{4}$ ; first anal ray  $1\frac{3}{8}$ ; length of pectoral  $1\frac{1}{8}$ ; ventral  $1\frac{1}{3}$ ; least depth of caudal peduncle  $2\frac{1}{8}$ .

Body elongate, oblong, robust, compressed, sides flattened, back hardly elevated, and profiles similar though upper is a little more convex or gibbous anteriorly than lower. Greatest depth about origin of ventral. Caudal peduncle stout, compressed, and its least depth about equal to its length.

Head small, compressed, sides flattened, and upper profile a little concave. Snout convex, a little produced and broad. Eye small, circular, and placed near first third in length of head. Mouth inferior, small, gape a little curved in profile, and its width much greater than gape. Lips rather thick or fleshy. No teeth either in jaws, on roof of mouth or on tongue. Tongue not free. Nostrils adjoining, a little nearer front of eye than tip of snout, and anterior with a fleshy or cutaneous rim, posterior margin enlarged a little and more or less conceals posterior nostril. Interorbital space convex, elevated more medianly. Opercles with striæ. Opercular flaps rather broad.

Gill-opening large, extending forward a little over half way in length of head but not to posterior margin of eye. Rakers  $6 + 14$ , short, pointed, about  $3\frac{1}{2}$  in longest filaments. Filaments long, longest 5 in head. No pseudobranchiæ. Branchiostegals 8, rather large and conspicuous, and graduated to uppermost which is largest. Isthmus rather long, triangular and with convex surface.

Scales small, cycloid, well exposed and more or less of equal size except on base of caudal and on breast. None on chest. Distributed in longitudinal even series. A pointed scaly flap in axil of ventral. Head and fins naked, except base of caudal. Lateral line continuous, more or less parallel with lower profile most of its course and extending posteriorly along middle of side of caudal peduncle to base of caudal. Tubes simple.

Origin of dorsal nearer that of adipose fin than tip of snout or a little behind tip of pectoral, high, and second branched ray longest. Adipose fin well developed, beginning a little behind that of anal, and length of fin a trifle less than half length of head. Height of adipose fin nearly half of its base. Anal originating much nearer base of caudal than origin of ventral, lower than dorsal, and first branched ray highest. Caudal robust, deeply emarginate, and lobes pointed. Pectoral rather long, about equal to height of dorsal, and reaching a little over half way to ventral. Ventral inserted behind origin of dorsal, a little longer than first branched anal ray, and reaching half way to origin of anal. Vent close in front of anal.

Color in alcohol more or less faded uniform brown, lower side and under surface paler. Fins brownish and immaculate. Each longitudinal series of scales on trunk with median portion paler so that body has appearance of many alternate dark and light longitudinal bands, most distinct or pronounced above. Iris slaty.

Length about 24 inches.

No. 7258, Wistar Inst. Anat. Phila. Meade River, Alaska. Nov. 1897. E. L. MacIlhenny. This is an adult female. Also three others which show the following: Head 5 to  $5\frac{1}{4}$ ; depth  $3\frac{2}{3}$  to  $4\frac{1}{3}$ ; D. III, 10 or III, 11; A. III, 9 or III, 11; scales 80 or 81 in lateral line to base of caudal and 4 to 6 more continued out on latter; gill-rakers about 12 on lower half of first arch and 7 to 9 on upper half; total length 21 to 24 inches. The smallest was obtained at Point Barrow, Alaska.

The following notes relative to the alimentary canal are expli-

cable by means of Plate IX, and were made from a rough dissection of the example described above.

Pharynx rather capacious.

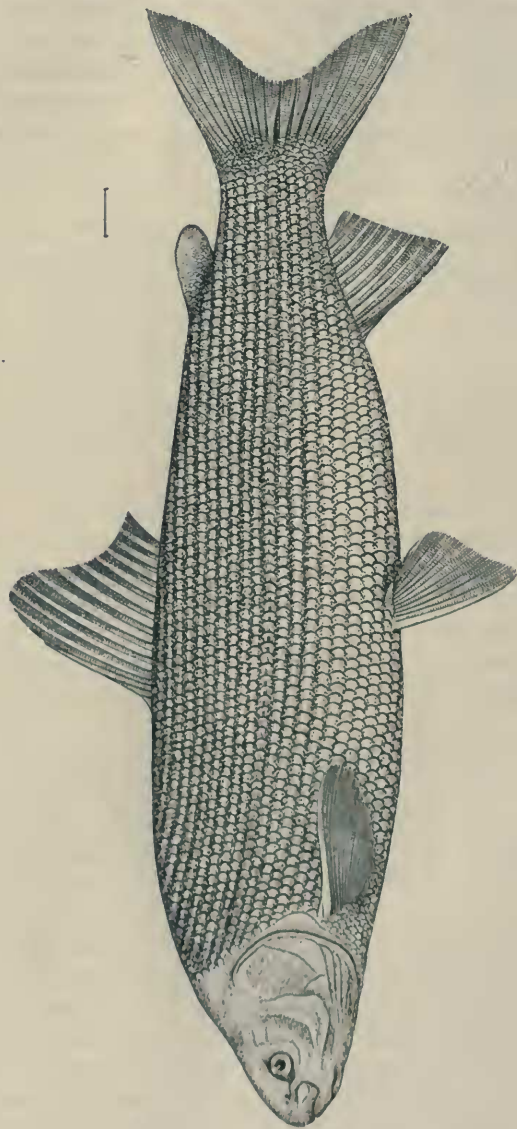
Stomach large, elongate, sack-like and somewhat muscular anteriorly.

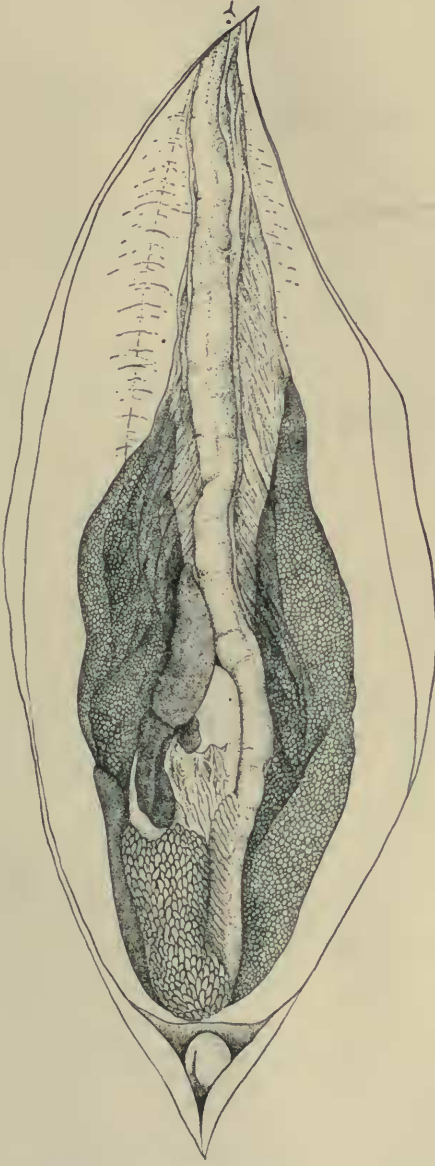
Pyloric appendages very numerous, rather short and more or less subequal.

Spleen large.

Intestine straight from pylorus, without sigmoid curve.

*Philadelphia, Academy of Natural Sciences, December 15, 1904.*





FOWLER—COREGONUS NELSONII BEAN.